November 27, 2018

Via Electronic Comment Filing System

Marlene H. Dortch
Office of the Secretary
Federal Communications Commission
445 12th Street SW, Room TW-A325
Washington, DC 20554

Re: DA 18-1140 (PS Dockets No. 15-91, 15-91) Sirius XM Radio Inc. request for limited waiver of EAS Part 11 rules.

Dear Marlene H. Dortch:

I would like to comment on DA 18-1140, Public Safety and Homeland Security Bureau request for comment on Sirius XM Radio Inc.'s motion for reconsideration and request for limited waiver of Emergency Alert System, Part 11 rules as part of PS Docket No. 15-94.

I generally support Sirius XM's comments; however, I suggest the requested waivers or exceptions are too broad. The issues should not be addressed as another one-time exception.

Sirius XM is correct that EAS rules are inconsistent between different types of EAS participants. The issues identified by Sirius XM are not unique to Satellite Audio Radio Services. As each new type of EAS participant was added over the years, one-off procedures were created leading to those inconsistencies. Individually each exception may have made sense at the time, but collectively the result is a confusing mess of conflicting details.

Sirius XM's submissions suggest a stringent interpretation of the EAS rules as part of their request for waivers. In practice the Commission hasn't aggressively checked the performance of EAS participants or stringently enforced the technical details of the EAS protocols. For example, most of DirecTV's regular monthly tests have had nearly unintelligible audio static for years. Some participating national (non-LP) terrestrial radio and television stations chop off the beginning or ending EAS data bursts or don't mute the original program audio which means EAS decoders may not detect the EAS signal.

I admire Sirius XM's conscientious attempt to strictly interpret the EAS rules in the most burdensome way as possible as justification for a waiver of those rules. But I also get the impression from Sirius XM's waiver requests over the years that its goal was more about eliminating EAS testing interruptions on its programming channels, which essentially every industry association for different EAS participants has requested over the years, instead of technical issues with low-bandwidth CODEC channels.

I support a request for the FCC to revaluate its EAS testing regime across all types of EAS participants taking into consideration current multi-channel digital technology and EAS equipment maintenance practices. I don't support a one-off waiver for just one EAS participant.

Impact on different EAS audiences

The EAS system has two related but distinct audiences: 1) other EAS participants and 2) the public. Although there is some overlap between the EAS audiences, functionally they rely on different factors in the Emergency Alert System and have different needs.

EAS participants rely on digital codes to activate EAS equipment, but broadcast staff rarely listen to the audio content to make decisions. The technical tolerances of the digital data bursts are a critical part for EAS equipment to activate the daisy-chain relay function. Any channel used as an EAS monitoring source must meet those tolerances.

On the other hand, the public has learned EAS messages have a specific cadence, i.e. three bursts of modem sounds and a long attention tone, but rarely have equipment that decodes the digital data bursts. As the FCC has determined in other proceedings, simulated EAS data bursts and attention tones with the same cadence and approximate sound achieves the objective of gaining the public's attention. Which is why advertisers sometimes try to use sound-alike effects in commercials.

While listening to low-bandwidth codec channels, the public would still be served by EAS messages with the same alerting cadence and similar sound even if the EAS data burst isn't technically suitable for activating EAS equipment. While traditional analog audio channels used the same data burst to notify both the public and digital EAS equipment, that may be better considered a historical coincidence. In the future, activating digital equipment and alerting the public should be considered discreet functions driven by the EAS.

Consistency of EAS rules across multi-channel EAS participants

The FCC has maintained common technical rules, including interrupting regular programming for on-air testing, to avoid creating competitive differences between those stations voluntarily acting as EAS sources and stations which don't. Nevertheless, as the EAS rules have evolved over the decades for different types of EAS participants, inconsistencies were created. Some differences are intentional, to attract non-required participants. Overly burdensome rules would discourage and cause voluntary participants to drop-out.

Voluntary FEMA satellite PEP sources have different testing regimes.

1. NPR Squawk Channel – weekly tests (RWT) of data bursts, but no audio or attention tones for verifying audio levels. This is a private channel, monitored only by NPR affiliates.
2. Premiere Networks FEMA channel – no regular testing for data bursts or audio levels. This is a private channel, monitored only by Premier Network affiliates.
3. Sirius XM – weekly (RWT) data bursts and monthly (RMT) data and audio message testing using Washington DC FIPS. This is public satellite broadcast service, with subscription channels and two public barker channels.

Direct Broadcast Satellite video providers pass through local EAS messages on local-in-local channel. On other channels, DBS participants relay monthly (RMT) data and audio messages, but only on 10% of virtual channels each month.

Each State Relay Networks (SRNs) have different testing regimes.

Downstream EAS participants have never monitored all channels in a digital multiplex. Instead they monitor a specific audio virtual channel in the digital multiplex or a traditional analog channel. As long process is coordinated, downstream EAS monitor stations know which specific virtual channel supporting AFSK EAS data bursts will be used as the EAS daisy-chain message source. To reduce manual upstream/downstream coordination, digital multichannel systems carrying AFSK compatible EAS daisy-chain messages on only a subset of virtual channels, should always transmit EAS messages and tests on the most widely accessible channel such as the barker channel in addition to any other virtual channels or sub-channels.

Public audience testing could be reduced to 10% of channels each month on multi-channel satellite and terrestrial video and audio providers without affecting EAS system readiness or testing on the primary channels used for EAS daisy-chain relay.

In the future, digital EAS readiness testing could be conducted out-of-band and requiring less frequent channel programming interruptions for public tests.

Clarifications and Suggestions

These suggestions are applicable to any digital multichannel participant. But for the purposes of this limited waiver, Sirius XM specific examples are used.

1. The Commission should not grant EAS participants full exemptions from EAS monthly or weekly testing just because no other EAS participant normally relies on that EAS source for normal EAS operations. On the hypothetical "very bad day," any working facility may be needed to reconstitute the national "daisy-chain." Regular testing ensures all physical facilities, including Sirius XM, are operational and ready in the unlikely event they are needed to reconstitute part of the EAS daisy-chain. No one can predict ahead of time, which facilities will still be operational on the "very bad day."
2. Weekly tests of the EAS header and EOM are primarily for equipment testing and daisy-chain link confirmation. Weekly tests are usually transmitted on all channels, but in digital multichannel systems, only necessary on the virtual channels designated for the EAS daisy-chain source. The weekly tests are essentially audience audio noise on other channels.
3. Monthly and national audio tests of the EAS header, Attention signal, audio message and EOM verify equipment readiness, EAS daisy-chain operation and provide public education. Tests must be transmitted on the designated EAS daisy-chain channel for the first two purposes. But the monthly and national audio tests are also for public familiarity and education. Monthly and national tests should be transmitted on other programming channels, including channels using AFSK incompatible audio codecs. The public will still hear the AFSK EAS tones, Attention signal and audio message for education and familiarity purposes, even if low-bandwidth CODECs can't activate EAS equipment.
4. Sirius XM's petition confirms listeners will continue to receive information about national EAS activations on all programming channels, including channels with AFSK incompatible audio codecs. Sirius XM's petition is vague what the information will sound like on channels with AFSK incompatible codecs. My assumption is EAS activations on low-bandwidth CODEC channels would sound like an EAS alert to a human with an EAS Header, Attention Signal, audio message and EOM; even if it can't activate EAS equipment.

Additional Digital Multichannel Testing Issues

Sirius XM Radio Inc. no longer includes revising EAS testing rules as part of its motion for reconsideration of a limited waiver. Nevertheless, I support the request the Commission revise its EAS testing rules for digital multichannel EAS participants.

- Require digital multichannel systems transmit weekly tests on a designated EAS daisy-chain virtual channel, e.g., a primary channel or most widely accessible channel for each system. A participant may still transmit weekly tests on other programming channels.
- Require digital multichannel systems transmit monthly tests on a designated EAS daisy-chain virtual channel, e.g., a primary channel or widely accessible channel for each system, as well as a subset of programming channels rotating through all programming

channels throughout the year. A participant may still transmit monthly tests on all programming channels. National tests must still be transmitted on all programming channels, consistent with national EAS activations.

Conclusions

In conclusion, I support Sirius XM Radio's request to permitting use of AFSK incompatible audio codecs on secondary and niche channels, although I think it is unnecessary because the FCC has never enforced performance rules, with some conditions:

- Sirius XM transmits all required weekly, monthly and national tests and actual EAS activations on at least one predictable, widely accessible channel using an audio codec compatible with AFSK EAS data bursts suitable for activating EAS decoders.
- Sirius XM transmits required monthly and national tests, and actual EAS activations on all programming channels with the EAS Header, Attention Signal, audio message and EOM; including those channels with AFSK incompatible audio codecs. On channels with AFSK incompatible audio codecs, the AFSK data bursts should sound like EAS messages to a human, but do not need to activate EAS decoders.

In a future rulemaking, the Commission should also revise its EAS testing rules to restore consistency between multichannel participants, including DBS, SDARS, analog and digital cable systems, IPTV systems, digital radio and HDTV broadcasters. A next-generation EAS could use digital control signals instead of audio AFSK, avoiding these problems on digital systems.

If you have any questions concerning these comments, please do not hesitate to call (703-892-1810) or email (sean@donelan.com) me.

Respectfully submitted,

Sean Donelan